

In the Claims

The following amendments are made with respect to the claims in the International application PCT/GB2004/005347.

This listing of claims will replace all prior versions and listings of claims in this application.

1 (original). A method of performing an electrochemical reaction in an electrochemical cell comprising electrodes separated by a hydrophilic ion-exchange membrane, wherein the reaction is conducted in the presence of an aqueous solution of an electrolyte of which the concentration is controlled.

2 (currently amended). ~~[[A]]~~ The method according to claim 1, wherein the degree of hydration of the membrane is controlled.

3 (currently amended). ~~[[A]]~~ The method according to claim 2, wherein the degree of hydration is controlled by removing water from the membrane.

4 (currently amended). ~~[[A]]~~ The method according to claim 3, wherein the degree of hydration is controlled by evaporating water from the membrane.

5 (currently amended). ~~[[A]]~~ The method according to ~~any of claims 2 to 4~~ claim 2, wherein water is a reactant and the input of water into the cell is controlled.

6 (currently amended). ~~[[A]]~~ The method according to ~~any preceding claim 1~~, wherein the electrolyte is toluenesulphonic acid, vinylsulphonic acid, acrylamido-(2-methyl)propanesulphonic acid, sodium hydroxide or potassium hydroxide.

7 (currently amended). ~~[[A]]~~ The method according to ~~any preceding claim 1~~, wherein the hydrophilic material is ionically inactive.

8 (currently amended). ~~[[A]]~~ The method according to ~~any of claims 1 to 6~~ claim 1, wherein the hydrophilic material is ionically active.

9 (currently amended). ~~[[A]] The method according to any preceding claim 1,~~  
wherein the hydrophilic material is a polymeric material.

10 (currently amended). ~~[[A]] The method according to claim 9, wherein the~~  
hydrophilic material is obtainable by the polymerisation of monomers including methyl  
methacrylate, N-vinyl-2-pyrrolidone or acrylonitrile.

11 (currently amended). ~~[[A]] The method according to claim 9 or claim 10, wherein~~  
the hydrophilic material is cross-linked.

12 (currently amended). ~~[[A]] The method according to any preceding claim 1,~~  
wherein the cell is a fuel cell or an electrolyser.

13 (currently amended). ~~[[A]] The method according to any preceding claim 1,~~  
wherein the cell is in the form of a membrane-electrode assembly (MEA), or a stack of  
MEAs.

14 (currently amended). ~~[[A]] The method according to any preceding claim 1,~~  
wherein the concentration is controlled by the addition of further electrolyte.